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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,560	06/04/2001	Christopher M. Dobson	720797.90019	3009

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EXAMINER	
NICHOLS, CHRISTOPHER J	

ART UNIT	PAPER NUMBER
1647	

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/787,560	DOBSON, CHRISTOPHER M.	
	Examiner	Art Unit	
	Christopher J Nichols, Ph.D.	1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *38-47,49,50 and 54-60* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *38-47,49,50 and 54-60* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *38-47,49,50 and 54-60* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Application, Amendments, and/or Claims

1. The Response and Amendment filed 5 October 2004 has been received and entered in full.

2. The Declaration by Fred Cohen filed on 5 October 2004 has been received and taken into consideration.

3. The Declaration by Christopher Dobson filed on 20 October 2004 has been received and taken into consideration.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Withdrawn Objections And/Or Rejections

5. The Rejection of claim **48** under 35 U.S.C. §112 ¶2 as set forth at pp. 13 ¶31 of the previous Office Action (5 April 2004) is hereby *withdrawn* in view of Applicant's amendments (5 October 2004).

6. The Rejection of claims **1, 44, 45,** and **46** under 35 U.S.C. §102(a) as set forth at pp. 13-14 ¶32-33 of the previous Office Action (5 April 2004) is *withdrawn* in view of the Declaration by Christopher Dobson filed on 20 October 2004 (5 October 2004).

7. The Rejections of claims **1, 44, 45,** and **46** under 35 U.S.C. §102(b) as set forth at pp. 14 ¶34-38 of the previous Office Action (5 April 2004) are *withdrawn* in view of Applicant's definition of "non-naturally occurring fibril" in the instant Specification (pp. 2-3).

Claim Rejections - 35 USC § 112

8. Claims **38-47, 49-50,** and **54-60** are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for *a method for preparing an amyloid fibril from a protein which does not naturally form amyloid fibrils, comprising:*

incubation of the SH3 domain of the p85α subunit of PI3-kinase at pH=2 for several months,

incubation of muscle acylphosphatase in 20-30% v/v trifluoroethanol (TFE), acetate buffer, pH= 5.5 at 25°C for at least 32 hours with stirring,

CspB-1, CspB-2, and/or CspB-3 incubated in a solution comprising 10-90% acetonitrile at pH=4.0, and

carboxypeptidase A2 incubated in a solution comprising 25 mM glycine, pH=3.0 at 90°C for at least 30 minutes or incubated in a solution comprising 4M to 7M urea,

does not reasonably provide enablement for *any other proteins and/or other conditions.* The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims for the reasons as set forth in the previous Office Action (5 April 2004).

9. The instant invention is drawn to methods of preparing a non-naturally occurring amyloid fibril. The language of said claims encompasses numerous known and unknown proteins only excluding certain amyloidogenic proteins (pp. 2 lines 23-31). The specification teaches that the SH3 domain of the p85α subunit of PI3-kinase, human muscle acylphosphatase, CspB-1, CspB-2, CspB-3, and wild type human carboxypeptidase A2 can be used to practice the method using the conditions listed above as taught in the Specification.

10. However, since the specification fails to provide any guidance for the successful use of other proteins and since resolution of the various complications in regards to amyloid fibril formation versus aggregation with fibrils (such as a neurofibrillary tangle) is highly unpredictable, and the conditions as taught in the Specification fail to share a commonality, one of skill in the art would have been unable to practice the invention without engaging in undue trial and error experimentation. In order to practice the invention using the specification and the state of the prior art as outlined above, the quantity of experimentation required to practice the invention as claimed to its *full scope* would require the *de novo* determination of formulations with known pH, protein concentration, solutes, solutions, temperature, and time to correlate with fibril formation. In the absence of any guidance from the specification, the amount of experimentation would be undue, and one would have been unable to practice the invention over the scope claimed.

11. The specification as filed does not provide any guidance or examples which share an essential feature, reagent, condition, or step that would enable a skilled artisan to use the disclosed method of making a non-naturally occurring amyloid fibril from any protein. Additionally, a person skilled in the art would recognize that predicting the efficacy of using the method to make any protein into an amyloid fibril based solely on a few non-coextensive examples is highly problematic. Thus, although the specification prophetically considers and discloses general methodologies of using the other proteins, such a disclosure would not be considered enabling since the state of protein aggregation is highly unpredictable.

12. Applicant traverses this rejection on the following grounds: **(a)** it is a matter of routine experimentation to achieve at least some aggregation and fibril formation for any given protein,

(b) all the required methods to practice the instant invention with different proteins to are well known in the art, **(c)** The Applicant states "The point is that a key part of the invention is that a skilled person would have no reason to try these straightforward experiments with these non-naturally occurring fibril goals." (pp. 7 of the Response filed 5 October 2004), and **(d)** the Declaration by Fred Cohen filed on 5 October 2004 supports the invention.

13. Applicant's arguments have been taken into consideration and are not found persuasive for the following reasons.

14. On "**(a)**", the Specification as filed only provides examples for SH3 domain of the p85α subunit of PI3-kinase, human muscle acylphosphatase, CspB-1, CspB-2, CspB-3, and wild type human carboxypeptidase A2. However, the Specification only contains suggestion on how to experiment to make amyloid fibrils from any given protein. Taken that, to date, there are at least 120,000 genes which encode proteins in humans (*Homo sapien sapien*) as a single species, the Specification has not provided sufficient guidance to achieve fibril formation for all and any given protein {see Venter *et al.* (16 February 2001) "The sequence of the human genome." Science **291**(5507): 1304-51}. Takahashi *et al.* (January 1999) "Optimization of hydrophobic domains in peptides that undergo transformation from alpha-helix to beta-fibril." Bioorg Med Chem. **7**(1): 177-85 teaches that an exposed hydrophobic nucleation domain at N-terminal causes a structural transition of a peptide from α-helix to β-fibril. It became clear that N-terminal acyl groups of particular lengths in a 2α-helix peptide caused the peptide to undergo an α-to-β transition. The peptide with the octanoyl group (C8-2α) showed the highest rate of transformation. Takahashi *et al.* demonstrates that the formation of fibrils is highly sequence dependent as some may readily for fibrils while others will not regardless of manipulation. As

currently presented, claims offer no specifics as to the sequence, domains, length, charge, or origin which would lead the skilled artisan to practice the methods in the absence of guidance. Therefore the claims represent an invitation to experiment.

15. On "**(b)**", as noted above the Specification does not provide sufficient guidance to cover all the possible proteins of one species, let alone any given protein. Contrary to Applicant's statement, the prior art, Guijarro *et al.* (1998) teaches that "Proteins known to form amyloid fibrils *in vivo* have no obvious sequence or structural similarities, and where the soluble folds of the amyloidogenic precursors are known they span the range of secondary, tertiary, and quaternary structural elements." (pp. 4224) Therefore the skilled artisan is confronted with a complex, unpredictable, and unexplained phenomenon, the formation of amyloid fibrils. Thus in the absence of any specific guidance as to the nature, structure, or requirements for amyloid formation the invention can not be accomplished without undue experimentation. Thus the skilled artisan is confronted with undue burden of experimentation to decipher what conditions will yield fibrils as the Specification only provides a desired outcome. It is noted that Applicant has provided examples in the Specification but not explained in which manner it may be extrapolated to apply to any given protein.

16. On "**(c)**", Applicant has admitted that "...the formation of amyloid fibrils does not require any specific preformed secondary structure in the solution state protein." (pp. 8, Response filed 13 January 2004). Therefore Applicant has admitted that neither guidance nor predictability exists in the art for the invention to be practiced. Furthermore, the statement by Applicant that "...a skilled person would have no reason to try these straightforward experiments with these non-naturally occurring fibril goals." (pp. 7 of the Response filed 5 October 2004) is

taken as further support for the unpredictability, lack of guidance in the art, and lack of examples to practice the invention to the full scope as instantly claimed. Further, the examples as provided by Applicant do not share any commonality, nor shared conditions, nor core of essential method step or reagent. Thus the guidance of each protein can only be applied to that specific protein and as is readily evident, does not extend between even the four examples as provided in the Specification. This leaves the skilled artisan no choice but to experiment without any guides or clues as to how to achieve the goal of the claims preamble.

17. On "**(d)**", while the combination of proteins and conditions that may yield amyloid fibrils may constitute a fecund ground for investigation, the CAFC ruled in *Genentech Inc. v. Novo Nordisk A/S* (CA FC) **42 USPQ2d 1001** (1997) that patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable. Citing *Brenner v. Manson,* **383 U.S. 519, 536, 148 USPQ 689, 696** (1966) (stating, in context of the utility requirement, that "a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion."). Therefore the CFAC stated that tossing out the mere germ of an idea does not constitute enabling disclosure. While every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the specification, reasonable detail must be provided in order to enable members of the public to understand and carry out the invention. That requirement has not been met in the instant specification with respect to the any protein and condition combination which in turns has produces amyloid fibrils.

18. In addition, Applicant has admitted on the record "...specific sequence patterns are unnecessary for the ability to form fibrils." (pp. 9 Response filed 13 January 2004). Therefore in

view of *Brenner v. Manson,* **383 U.S. 519, 536, 148 USPQ 689, 696** (1966) as discussed above, Applicant does not have an enabling disclosure but a vague statement of general possibilities constituting an invitation to experiment.

19. Also noted that Damaschun *et al.* (20 August 1999) "Proteins can adopt totally different folded conformations." J Mol Biol. **291**(3): 715-25 teaches that the three-dimensional structure of a protein is determined by interactions between its amino acids and by interactions of the amino acids with molecules of the environment. The great influence of the latter interactions is demonstrated for the enzyme phosphoglycerate kinase from yeast (PGK). In the native state, PGK is a compact, bilobal molecule; 35% and 13% of its amino acids are organized in the form of α-helices and β-sheets, respectively. The molecules unfold at acidic pH and low ionic strength forming random-walk structures with a persistence length of 3 nm. More than 90% of the amino acid residues of the ensemble have π,σ-angles corresponding to those of a straight β-chain. Upon addition of 50% (v/v) trifluoroethanol to the acid-unfolded protein, the entire molecule is transformed into a rod-like, flexible α-helix. Addition of anions, such as chloride or trichloroacetate, to the acid-unfolded protein leads to the formation of amyloid-like fibers over a period of many hours when the anion concentration exceeds a critical limit. Half of the amino acid residues are then organized in β-sheets. Both of the non-natively folded states of PGK contain more regular secondary structure than the native one. The misfolding starts in both cases from the acid-unfolded state, in which the molecules are essentially more expanded than in other denatured states, e.g. those effected by temperature or guanidine hydrochloride. Thus the conditions of the solution and the protein itself will determine what confirmation the protein takes on. The claims have not specified any concrete conditions, domains, motifs, amino acid

sequences, to which one may practice the invention. And since the Applicant dismisses any specific conditions such as alcohol, acetonitrile, urea, or generally denaturing conditions as required, no guidance other than to experiment with each and every protein is set forth by the Specification.

20. And as discussed earlier on the predictability of the art, Chiti *et al.* (March 1999) "Designing conditions for in vitro formation of amyloid protofilaments and fibrils." PNAS **96**: 3590-3594 teaches that with sufficient experimentation protein crystals can be formed in vitro in amyloid fibrils from proteins that do not generally form amyloid fibrils (pp. 3590). However Chiti et al. (1999) note that: "It is important to make it clear that the particular conditions we have used are not suggested to be universally appropriate for fibril formation by proteins." (pp. 3593) Thus the skilled artisan is confronted with little predictability for the conditions under which the instant invention may be practiced to its full scope as protein crystallization is known to be a notoriously difficult and unpredictable art.

21. Thus the specification of the instant application fails to provide adequate guidance for one of skill in the art to overcome the unpredictability and challenges of applying the results of a few proteins to the full range of proteins claimed as exemplified in the references above.

22. Claims **38-50** and **54-60** are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention for the reasons as set forth at pp. in the previous Office Action (5 April 2004).

23. The independent claims have provided an endpoint but not delineated the physical parameters of the method thus implying that said parameters are not known or must be confirmed. Thus, the claims are drawn to a genus of agents that is defined by a desired end product.

24. Applicant has only provided evidence to practice the following embodiments of the invention: incubation of the SH3 domain of the p85α subunit of PI3-kinase at pH=2 for several months, incubation of muscle acylphosphatase in 20-30% v/v trifluoroethanol (TFE), acetate buffer, pH= 5.5 at 25°C for at least 32 hours with stirring, CspB-1, CspB-2, and/or CspB-3 incubated in a solution comprising 10-90% acetonitrile at pH=4.0, and carboxypeptidase A2 incubated in a solution comprising 25 mM glycine, pH=3.0 at 90°C for at least 30 minutes or incubated in a solution comprising 4M to 7M urea. And as discussed above none constitute an essential reagent, step, or condition that allows the skilled artisan to translate the invention to other proteins.

25. To provide adequate written description and evidence of possession of a claimed genus, the specification must provide sufficient distinguishing identifying characteristics of the genus. The factors to be considered include disclosure of complete or partial structure, physical and/or chemical properties, functional characteristics, structure/function correlation, methods of making the claimed product, and any combination thereof. In this case, the only factor present in the claim that is a recitation of a desired end product. The specification does not identify any particular portion of the method that must be conserved, nor does it provide a disclosure of structure/function correlation. The distinguishing characteristics of the claimed methods are not

described. Accordingly, the specification does not provide adequate written description of the claimed genus.

26. Patent protection cannot be granted for an idea or an intangible suggestion. While the method of claims 38 and 60 may constitute a fecund ground for investigation, the CAFC ruled in *Genentech Inc. v. Novo Nordisk A/S* (CA FC) **42 USPQ2d 1001** (1997) that patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable. Citing *Brenner v. Manson,* **383 U.S. 519, 536, 148 USPQ 689, 696** (1966) (stating, in context of the utility requirement, that "a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion."). Therefore the CFAC stated that tossing out the mere germ of an idea does not constitute enabling disclosure. While every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the specification, reasonable detail must be provided in order to enable members of the public to understand and carry out the invention. That requirement has not been met in the instant specification with respect to the full range of proteins that may be chemically coerced to form an amyloid fibril.

27. Applicant traverses this rejection on the following grounds: **(a)** it is a matter of routine experimentation to achieve at least some aggregation and fibril formation for any given protein, **(b)** all the required methods to practice the instant invention with different proteins to are well known in the art, **(c)** The Applicant states "The point is that a key part of the invention is that a skilled person would have no reason to try these straightforward experiments with these non-naturally occurring fibril goals." (pp. 7 of the Response filed 5 October 2004), and **(d)** the Declaration by Fred Cohen filed on 5 October 2004 supports the invention.

28. Applicant's arguments have been taken into consideration and are not found persuasive for the following reasons.

29. On "**(a)**", MPEP §2145 clearly states that attorney argument is not evidence unless it is an admission, in which case, an examiner may use the admission in making a rejection (MPEP § 2129 and §2144.03). Furthermore, the arguments of counsel cannot take the place of evidence in the record. In the instant case the Applicant is asserting that the claimed method may be used for any given protein under any unspecified condition while no data, information, or teaching supports applying the examples in the instant Specification outside the small group of proteins taught. This is particularly relevant as the Specification defines "protein" as "...any protein capable of forming fibrils..." (pp. 1 lines 10-11). {see *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness.") and MPEP § 716.01(c)}.

30. Therefore the full breadth of the claim fails to meet the written description provision of 35 U.S.C. §112, first paragraph. Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. §112 is severable from its enablement provision.

31. Claim **38** is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps for the reasons as set forth at pp. 12 ¶30 in the previous Office Action (5 April 2004) [see MPEP § 2172.01]. Applicant traverses this rejection in the Response filed 5 October 2004 by asserting that the

method steps have been included. This is not persuasive as noted in Ex parte Erlich 3 USPQ2d 1011, at page 1011 (Bd. Of Pat. App. And Inter. 1987): "Method claims need not recite all operating details but should at least recite positive, active steps so that claim will set out and circumscribe particular area with reasonable degree of precision and particularity and make clear what subject matter claims encompass, as well as make clear subject matter from which others would be precluded."

32. The Examiner notes that Applicants need not recite all the operating details but the method claim should at least recite a positive, active(s) so that the claim will "set out and circumscribe a particular area with a reasonable degree of precision and particularity and make clear what subject matter claims encompass, as well as make clear subject matter from which others would be precluded." These conditions have not been met by Applicant in instant claim 38.

Claim Rejections - 35 USC § 102

33. Claims **38-40, 43-44, 47, 54-56,** and **60** are rejected under 35 U.S.C. 102(b) as being anticipated by Jarrett & Lansbury (15 December 1992) "Amyloid fibril formation requires a chemically discriminating nucleation event: studies of an amyloidogenic sequence from the bacterial protein OsmB." Biochemistry **31**(49): 12345-52.

34. Jarrett & Lansbury (1992) teaches that a peptide corresponding to residues 28-44 of *Escherichia coli* OsmB protein [OsmB(28-44)] formed amyloid fibrils in solution. The kinetics of OsmB(28-44) aggregation were characterized by a delay period during which the solution remained clear, followed by a nucleation event which led to a growth phase, during which the

solution became viscous and turbid due to the presence of insoluble fibrils. The delay period could be eliminated by seeding the supersaturated solution with previously formed fibrils thus meeting the limitations of claim 47, 54, 55 (pp. 12345). Jarrett & Lansbury (1992) teaches that 10-2000 μM (0.01 to 2 mM) OsmB(28-44) was incubated in a concentrated salt solution at 25°C thus meeting the limitations of claims 38, 43, 44, and 60 (Figure 3).

35. Jarrett & Lansbury (1992) teaches that 10-2000 μM (0.01 to 2 mM) OsmB(28-44) was incubated 30% (v/v) HFIP (hexafluoroisopropanol) or 90% (v/v) TFE (trifluoroethanol) thus meeting the limitations of claims 39, 40, and 56 (pp. 12347-12348).

36. Jarrett & Lansbury (1992) teaches that practicing the above method with three proteins, OsmB, OsmG3, and OsmA, all of which form amyloid fibrils, none of which occur naturally as they are all transmembrane proteins thus meeting the limitations of claims 38 and 60 (Figures 4-5).

37. Claims **38, 42, 44, 45, 46, 49, 54, 55, 59,** and **60** are rejected under 35 U.S.C. 102(b) as being anticipated by Kedar *et al.* (October 1972) "*IN VITRO* Synthesis of "Amyloid" Fibrils from Insulin, Calcitonin and Parathormone." Israel Journal of Medical Sciences **12**(10: 1137-1140.

38. Kedar *et al.* teaches a method of making amyloid fibrils from bovine insulin, calcitonin, and parathyroid hormone comprising heating said proteins to 80°C form 30 minutes in a solution pH=2.5 and then treated with 10M urea with and without the addition of zinc thus meeting the limitations of claims 38, 42, 44, 45, 46, 49, 54, 55, 59, and 60 (pp. 1137-1138; Table 1).

39. The Examiner notes that in the instant Specification the Applicant specifically defines "bovine insulin" as a non-naturally occurring amyloid fibril protein (pp. 3 line 12).

Summary

40. No claims are allowed.

41. The Examiner notes that "HFIP" stands for hexafluoroisopropanol and "TFE" stands for trifluoroethanol [see Kuroda *et al.* (September-October 1992) "Powerful solvent systems useful for synthesis of sparingly-soluble peptides in solution." Int J Pept Protein Res. **40**(3-4): 294-9].

42. The Examiner notes that all experiments are practiced at STP (Standard Temperature and Pressure in biology) is defined as 25°C and 76 mm Hg unless otherwise noted.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Christopher James Nichols, Ph.D.** whose telephone number is **(571) 272-0889**. The examiner can normally be reached on Monday through Friday, 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Brenda Brumback** can be reached on **(571) 272-0961**.

The fax number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see **http://pair-direct.uspto.gov**. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free).

Elizabeth C. Kemmerer

CJN
January 27, 2005

ELIZABETH KEMMERER
PRIMARY EXAMINER